Evaluation of Asymetry of the Person Due to Dental Diseases

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Relevance. Clinical and symptomatic signs and the absence of a permanent description of the syndromes of dysfunction of the joints of the temporomandibular joint makes it difficult to diagnose, while research methods have been developed, including clinical and functional, anthropometric, immunomicrobiological, social and instrumental studies. At the same time, patients often complained of "noise" in the movements of the lower jaw, pain in the masticatory muscles during prolonged chewing or talking, chewing disorders, ringing and noise in the ears. Complaints of patients are associated not only with morphofunctional changes in the temporomandibular joint, but also with the involvement of all organs and tissues of the masticatory apparatus in the pathological process, and in some cases with psycho-emotional changes in a person [1.2.3.5.7.9].

In recent years, a lot of data has been obtained in our country on pain syndromes of the temporomandibular joint, in particular, the pathogenesis of joint dysfunction syndromes and the correction of joint changes, the assessment of the role of metalloproteinase, the use of enzyme therapy in the treatment, which led to the formation of new methods of diagnosis and treatment. Patients with temporomandibular joint pain associated with a defect in the dentition have a high risk and severity of joint dysfunction syndromes, since these factors affect the development and clinical course.

The etiology of OA has not yet been studied. Various risk factors play a role in the development of OA of the TMJ: female sex, trauma of the condylar process of the lower jaw, thyroid pathology, age over 30 years, etc. Women suffer from OA of the TMJ 6 times more often than men. Polyosteoarthritis involving the TMJ is clearly associated with the age of 50-83 years, thyroid pathology, and female sex. Regardless of the risk factor, early stages of TMJ OA are diagnosed 3.4-9 times more often [2.4.6.8.10].

Among the symptoms of manifest OA of the TMJ, there are: local dull, aching pain when moving the lower jaw, crunching, crepitus, limitation of lower jaw movements, blockade phenomenon (stiffness), morning stiffness in the affected joint [11.13].

Pain is the most common symptom for which a patient with OA consults a doctor. Pain in OA is mechanical in nature and absent at rest. The causes of pain in OA can be: trabecular microfractures, venous stasis in the bone marrow, intra-medullary hypertension, synovitis, increased pressure on the exposed subchondral bone, irritation of the capsule by osteophytes, disc displacement/damage, myalgia, ligament damage, capsule fibrosis. The pain syndrome increases as OA progresses.

The occurrence of articular sound is associated with: ossification of ligaments, tendons, capsule, changes in the tone of masticatory muscles, the presence of osteophytes, "articular mouse", violation of the congruence of articular surfaces, disc displacement. Articular noise may appear before other symptoms, but this sign is not enough to make a diagnosis of OA, since crunching, crepitus, clicking exist in normal joints, as well as in internal disorders, joint hypermobility [12]. Articular murmur in OA may be absent altogether. Clicking is not a pathological sign; it often accompanies active movements in the joint [14.16.17].

Dysfunction of the TMJ in OA develops gradually, this is facilitated by: pain, spasm of the masticatory muscles, changes in the elasticity of the ligaments, capsule, and disc position. Morning

stiffness in OA can last no more than 30 minutes. In the recognition of OA, an important role is played by radiation research methods: linear (TMG), computer (CT), magnetic resonance (MRI) tomography, ultrasound (ultrasound). Asymptomatic OA is detected only on x-ray examination of the joints and is a manifestation of a compensated course [15].

The use of layered radiography makes it possible to obtain a highly informative image of the temporomandibular joint, cheap, accessible, allows you to assess the shape, size, structure of bone tissue. X-ray changes in synovial joints in OA are typical: osteophytes, narrowing of the joint space, subchondral osteosclerosis, small cysts, flattening of the articular surfaces, limitation of joint mobility [18].

Clinical and radiological examination of patients with OA of the TMJ made it possible to clarify the diagnostic criteria for the verification of the disease. Criteria for OA of the TMJ include 4 clinical symptoms and 5 radiological signs, which allows you to correctly make a diagnosis and identify a group of patients with probable OA who need dynamic monitoring.

The introduction of CT has made it possible to increase the information content of radiation diagnostics of TMJ diseases due to the absence of overlaps, blurring of structures; good spatial resolution of thin tissue sections; the ability to determine the density of tissues in units of Hounsfield; reconstruction of TMJ structures in various planes; obtaining both joints in one cut. In many clinics, CT is the most used method for examining the TMJ [17.18].

Most scientific research is devoted to MRI diagnostics of TMJ diseases due to the good spatial resolution of visualization of soft tissues, cancellous bone structure, intra-articular adhesions, and fibrosis. In patients with long-term arthralgias, MRI can assess the presence of bone marrow edema of the mandibular head. Some scientists consider MRI as the "gold standard" for diagnosing TMJ diseases [12].

Also, when analyzing the medical records of 46 patients of the main group, we identified the following nosological forms of joint dysfunction syndromes; OSA - 46.42% (OG-1); NMS - 33.33% (OG-2); dislocation of the articular disc (VSD) - 20.23% (OG-3). We present the following table of clinical signs, based on the results obtained from the examination of patients in OG-1, 2 and 3. Having studied in detail the data we identified, we identified clinical signs that occur in 100% of cases in OG-1 - 95%, OG- 2 and 3 for nosological forms of syndromes of dysfunction of the joints of the temporomandibular joint.

The following combination of symptoms was observed in 97% of patients with temporomandibular joint dysfunction syndromes: click with moderate mouth opening, burning pain in the temporomandibular joint, bad habits, partial absence of teeth, pain on palpation in the temporomandibular joint, deviation , early contacts, a decrease in the amplitude of the masticatory muscles, an increase in the bioelectrical activity of the masticatory muscles at rest. A similar frequency is observed in patients with NMS. In patients with VSD in almost 100%, there is a click with moderate opening of the mouth, short-term pain in the temporomandibular joint, during chewing and maximum opening of the mouth, sensation of a foreign body in the joint, rapid muscle fatigue during chewing, "stagnation" of the joint, "blocking" , inability to properly connect teeth, bad habits, one-sided chewing, pain on palpation of the lateral pterygoid muscles, limited mouth opening, deflexion from the injured side, early contacts, decrease in the amplitude of mouth opening, narrowing of the joint lumen, location of the articular heads on the slope of the articular tubercle.

Combined with other drugs needed by a patient with OA. It should be borne in mind the individual sensitivity of patients to various NSAIDs. Appointment to the patient at the same time of two different NSAIDs is considered irrational, since adverse reactions are intensified. The use of NSAIDs in OA should not exceed 2-3 weeks of continuous use.

The use of selective cyclooxygenase-2 inhibitors, which are significantly less likely to cause damage to the mucous membrane of the gastrointestinal tract, does not have a negative effect on cartilage. Selective NSAIDs include: nimesulide, meloxicam, celecoxib. Indications for their appointment: old age, the presence of erosive gastritis and peptic ulcer in history, the presence of arterial hypertension, bronchial asthma.

To exclude systemic adverse reactions, NSAIDs can be used locally in the form of ointments, gels, creams. To date, there are no generally accepted recommendations for choosing a specific NSAID, and each doctor decides this issue based on his personal experience.

Some authors attach great importance in the pathogenesis of pain in OA to muscle tension. Blockades, physiotherapy, and muscle relaxants are used to relieve severe pain and limit mouth opening during reflex spasm of masticatory muscles. Central muscle relaxants (tolperisone, tizanidine) do not have serious side effects and can be prescribed in outpatient practice. For intra-articular therapy, long-acting GCs have become widespread: betamethasone, tri-amcinolone, methylprednisolone. The effectiveness of GC treatment in patients with OA is 52.3-75%. The use of hydrocortisone for intraarticular administration is now considered inappropriate due to the low efficacy of the drug and the large number of adverse reactions compared to other GCs. Indications and contraindications for intra-articular administration of HA are well defined. GC-therapy has no independent significance, but is only an additional method in the complex treatment of OA.

Intra-articular injection of HA into the TMJ should be performed by a doctor who knows the technique of arthrocentesis, in compliance with the rules of asepsis and antisepsis in a treatment room. 1-2 injections of HA are injected into one TMJ. The second intra-articular injection, not earlier than 7-10 days later, is determined individually based on the results of the previous procedure. If the last injection is ineffective, further local GC therapy should be abandoned. In the same TMJ, HA is administered 1-2 times a year.

Pulse currents of low frequency have anti-inflammatory, analgesic, antispasmodic, myostimulating effect, improve hemodynamics, metabolic processes. A round electrode with a diameter of 25 mm is placed on the affected joint, the cathode is placed in the area of pain irradiation. The rectified mode is used, the frequency is 20-30 Hz, the duration of the session is 12-15 minutes. The current strength is selected individually until the patient feels a non-painful vibration. The course of treatment is 8-10 sessions.

Many randomized trials and systematic reviews have been published that discuss the reduction of pain, morning stiffness, improvement of joint function in patients with OA in the treatment of pulsed currents, interstitial and transcranial electrical stimulation in comparison with placebo or other methods [14.16.18].

Balneotherapy (sulfide, radon, iodine-bromine, sodium chloride baths) is carried out taking into account the age and concomitant diseases of the patient. Applications of silt or peat mud (temperature 38-42°C), paraffin and ozokerite (temperature 50-55°C) increase the temperature of periarticular tissues, dilate peripheral vessels, increase hemodynamics, and activate tissue metabolism.

Complex conservative treatment of OA currently remains the main method of treatment, in which in most cases a positive trend is achieved. Persistence of pain and persistent limitation of mouth tearing in conservative treatment of TMJ OA serve as an indication for surgical treatment.

Endoprosthetics of the TMJ is performed in 83% of patients under the age of 50 years. After TMJ endoprosthesis, mouth opening improves and is 29–38 mm [2.4]. Within 10-15 years, the results of TMJ arthroplasty are good in 78.695% of patients [16]. The function of the joint may deteriorate due

to loosening of the prosthesis. E.Baltali et al. [11] carried out the replacement of the TMJ endoprosthesis in 6.5% of cases after 10 years. Improving the design of endoprostheses helps to reduce cases of their instability. TMJ endoprosthesis is currently one of the popular alternatives to surgical treatment.

Clinical symptoms of TMJ OA are not specific. Sensitivity, accuracy of clinical diagnosis of TMJ OA are acceptable, but do not solve the problem of differential diagnosis with other non-inflammatory diseases: internal disorders, joint hypermobility, dysplasia, osteochondritis dissecans, aseptic osteonecrosis, enthesopathy. In practice, it is necessary to use diagnostic criteria for TMJ OA.

Advances in TMJ imaging techniques have expanded the diagnosis of OA. To determine the early stages of TMJ OA, ultrasound, CT, MRI, secondary synovitis - ultrasound, MRI, internal disorders - MRI are important. The most informative methods for diagnosing TMJ OA are CT and MRI.

In the treatment of OA, physicians must comply with the following principles: treatment must be comprehensive, the effectiveness of treatment depends on the clinical form of OA, the presence or absence of complications (internal disorders, synovitis, reflex spasm of masticatory muscles). When choosing a method of treating OA, it is necessary to take into account the patient's comorbidities. Important criteria for the effectiveness of the therapy for TMJ OA are the elimination of pain, improvement of joint function.

CONCLUSION. A study based on the results of a special study of pathologies of the temporomandibular joint (r ~ 0.96) between changes in the amplitude of vertical movements of the lower jaw, a decrease in the average amplitude to 1.0 ± 0.2 cm (24.8 ± 4.1%); narrowing of the joint space of the right joint D1 = 1.8 mm, D2 = 1.3 mm, D3 = 1.7 mm; narrowing of the joint space of the left joint D1 = 1.2 mm, D2 = 1.2 mm, D3 = 1.3 mm; with OSA - BEA at rest of masticatory muscles = 41.2 ± 4.9, temporal muscles 43.8 ± 4.2; BEA (compression) of masticatory muscles 490.2 ± 43.2, temporal muscles 432.6 ± 50.3; BEA (chewing) of masticatory muscles = 377.2 ± 69.4, temporal muscles 334.3 ± 81.4; chewing time of masticatory muscles = 7.98 ± 0.2, temporal muscles 7.98 ± 0.4; in a state of rest masticatory muscles = 6.44 ± 0.5, temporal muscles 6.56 ± 0.6. The results of the study - tests of clinical activity and diagnostic activity, anamnesis data, a comparative diagnostic algorithm for early diagnosis and treatment of pathologies of the temporomandibular joint, developed and used for practical use - have increased efficiency compared to traditional methods by 15-17%. The results of the study, our comprehensive etiopathogenetic scheme for the treatment of pathologies of the temporomandibular joint - OAS, NMS and VVD, confirmed that after 6 months the results were successful by 18-18.5% compared with traditional methods of treatment, that is, 85.6% were completely cured, only 6.2% of cases reported recurrence of symptoms of the disease.

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